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| 10/581,522 | 02/13/2007 | Toshiaki Fujisato | 292147US26PCT | 9480 |

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| EXAMINER | |
|---|---|
| CROWELL, ANNA M | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 1716 | |

| NOTIFICATION DATE | DELIVERY MODE |
|---|---|
| 07/22/2010 | ELECTRONIC |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/581,522 | FUJISATO, TOSHIAKI | |
| | Examiner | Art Unit | |
| | Michelle Crowell | 1716 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *29 April 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1,2,4 and 7-11* is/are pending in the application.

4a) Of the above claim(s) *4 and 7* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 2, and 8-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-2 and 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walko,II (U.S. 6,221,202) in view of Koshimizu (U.S. 6,000,360).

Referring to Figure 1 and column 6, line 64-column 8, line 40, Walko,II discloses a plasma processing apparatus for applying a plasma process to a process target, comprising: a process chamber 14 that applies plasma process to said process target; a mounting table 29, provided in said process chamber that mounts thereon said process target; a process gas supply inlet 21 that supplies a process gas for applying the plasma process to said process target into said process chamber; a plasma generation unit that generates plasma of the process gas supplied by said process gas supply unit by applying a high-frequency voltage (col. 7, lines 29-30); and a dike 40 that confines the plasma as generated by said plasma generation unit in an area above said process target mounted on said mounting table 29, wherein said dike, which serves as an opposite electrode for generating plasma (col. 7, lines 66-67) includes: a conductive member formed of a conductor (col. 7, lines 66-67); and a protruding portion formed to surround said mounting table and to be higher than a mounting surface of said mounting table (Fig. 1),wherein said conductive member is grounded (col. 7, lines 66-67), and wherein said protruding portion of

said dike is formed to be higher than said process target mounted on said mounting table, so as to surround the area above said process target (Fig. 1),

Walko,II fails to specifically teach a process gas supply unit.

Referring column 5, lines 26-28, Koshimizu teaches that it is conventional to provide a process gas supply unit to the gas inlet in order to obtain the processing gas. Thus, it would have been obvious to one ordinary skill in the art at the time of the invention to provide the gas inlet of Walko,II with a process gas supply unit as taught by Koshimizu since it is conventionally known and is simply required in order to obtain the processing gas.

Walko,II fails to teach that the plasma processing apparatus further comprises a lifting unit that lifts up or down said dike and said mounting table in said process chamber.

Referring to Figure 5 and column 4, lines 10-22, Koshimizu teaches a plasma processing apparatus wherein a lifting unit 114 for lifting up or down the dike 122 and a mounting table 110 in order to ensure the uniformity in processing. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the dike of Walko,II to have a lifting unit for lifting up or down the dike and a mounting table in order to ensure the uniformity in processing.

With respect to claim 2, the plasma processing apparatus further includes wherein said dike 40 includes an insulating member which covers said conductive member and electrically insulates between said conductive member and said mounting table (col. 8, lines 2-4).

With respect to claims 8-10, the apparatus of Walko,II in view of Koshimizu is capable of achieving the desired dimension of the interval between the top end of the protruding portion

of the dike and an inner wall of the process chamber since the dike will vertically move up towards the inner wall.

With respect to claim 11, referring to Figure 1 and column 6, line 64-column 8, line 40, Walko,II discloses a plasma processing apparatus for applying a plasma process to a process target, comprising: means for applying a plasma process 14 to said process target; means for supporting the process target 29 thereon, the means for supporting being provided in said process chamber; gas inlet 21 for supplying a process gas for applying the plasma process to said process target into said process chamber; means for generating plasma of the process gas by applying a high-frequency voltage (col. 7, lines 29-30); means for confining the generated plasma gas 40 in an area above said process target supported by the means for supporting, and the means for confining including a conductive member (col. 7, lines 66-67), and projecting higher than the process target so as to surround the area above said process target (Fig. 1).

Walko,II fails to specifically teach a means for supplying a process gas.

Referring column 5, lines 26-28, Koshimizu teaches that it is conventional to provide a process gas supply unit to the gas inlet in order to obtain the processing gas. Thus, it would have been obvious to one ordinary skill in the art at the time of the invention to provide the gas inlet of Walko,II with a means for supplying a process gas as taught by Koshimizu since it is conventionally known and is simply required in order to obtain the processing gas.

Walko,II fails to teach a means for lifting for lifting up or down the means for confining and said mounting table in said process chamber.

Referring to Figure 5 and column 4, lines 10-22, Koshimizu teaches a plasma processing apparatus wherein a lifting unit 114 for lifting up or down the dike 122 and a mounting table 110 in order to ensure the uniformity in processing. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the means for confining of Walko,II to have a means for lifting up or down the means for confining and a mounting table in order to ensure the uniformity in processing.

***Response to Arguments***

3. Applicant's arguments with respect to Hirose and Miyoshi have been considered but are moot in view of the new ground(s) of rejection.

4. Applicant's arguments with respect to Koshimizu have been fully considered but they are not persuasive.

5. Applicant has argued that Koshimizu fails to teach that the protruding portion is formed higher than a mounting surface of a mounting table, so as to surround the mounting table and a support table. However, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). In the instant case, Walko,II teaches a dike having a protruding portion higher than a mounting surface of a mounting table, so as to surround the mounting table and a support table. Koshimizu was simply applied for the teaching (not bodily incorporation) of lifting a dike or means for confining in order to ensure the uniformity in process. Therefore, the apparatus of

Walko,II in view of Koshimizu would lift the dike of Walko,II and thus satisfies the claimed requirements.

***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michelle Crowell whose telephone number is (571)272-1432. The examiner can normally be reached on M-Th (9:30 -6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on (571) 272-1435. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michelle Crowell/
Examiner, Art Unit 1716

/Parviz Hassanzadeh/

Supervisory Patent Examiner, Art Unit 1716